

BOMOLOCHUS PAUCUS, A NEW SPECIES OF
COPEPOD PARASITIC ON SCIAENID
FISHES FROM SOUTHERN
CALIFORNIA

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Abstract.—A new species of bomolochid copepod, *Bomolochus paucus*, from California sciaenid fishes differs from all other *Bomolochus* species by the combination of bearing 5 setae on the last exopod segment of leg 4, spinules on the ventral surface of the last abdominal segment only, and the endopod of leg 4 only slightly longer than the exopod.

As part of a general survey of copepods parasitic on fishes occurring at the Orange County sewer outfall, California, one of us (MD) examined 237 white croaker *Genyonemus lineatus* (Ayres) and 97 queenfish *Seriphus politus* Ayres. A new species of parasitic copepod (Bomolochidae) was collected from these sciaenid fishes, and is described below.

A low incidence and intensity of infestation is indicated as only 1 queenfish and 8 white croakers were infested.

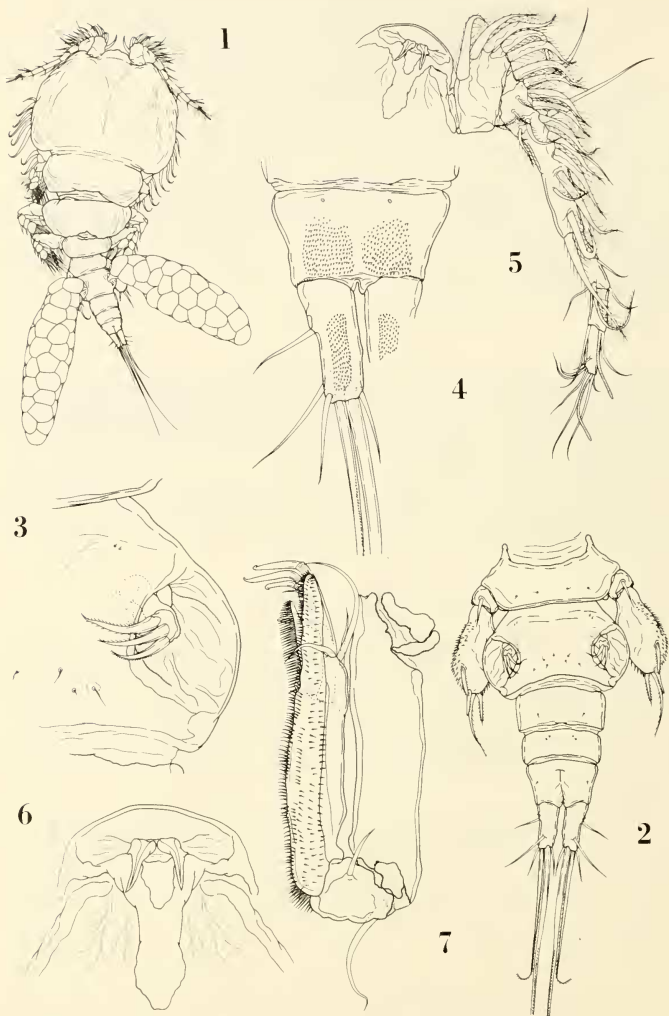
Type specimens have been deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Bomolochus paucus, new species
Figs. 1-21

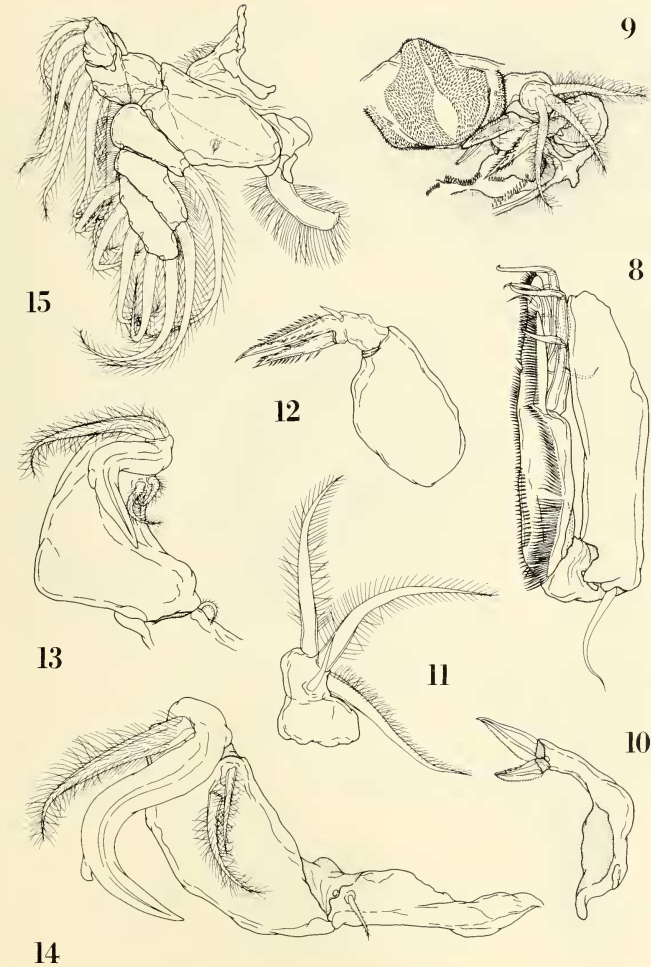
Material examined.—From the white croaker *Genyonemus lineatus* (Ayres): Holotype female (USNM 210491) from station T0 (33°37'N, 117°59'W), 7 Apr 1976. Four paratype females (USNM 210492) from station T0 and T3 (33°34'N, 117°58'W), 7 Apr 1976. Additional specimens consisting of 1 female cephalothorax and 1 immature female from station T0; 1 immature male from station T3; and 1 nonovigerous female from the queenfish, *Seriphus politus* Ayres from station T0.

Description.—Female: Body form as in Fig. 1. Total length 1.11 mm (0.99–1.21 mm), greatest width 0.59 mm, (0.55–0.64 mm). Cephalothorax wider than long (479 × 611 μm) comprising about 40% of total body length. Thoracic segments bearing legs 2–5 free, first 2 segments nearly equal in width (anterior most slightly wider). Genital segment (Fig. 2) wider than long (124 × 175 μm), 3 setae of leg 6 short, not extending to margins of segment (see Figs. 2–3). Abdomen 3-segmented, (Fig. 2) segments measure 55 × 115 μm, 41 × 104 μm, 53 × 94 μm (l × w) respectively. Ventral surface of abdomen and caudal rami with spinules (see Fig. 4). Caudal rami longer than wide (55 × 26 μm) bearing 2 major setae and 4 minor setae, both major setae with spinules along inner margin, longest seta 432 μm long.

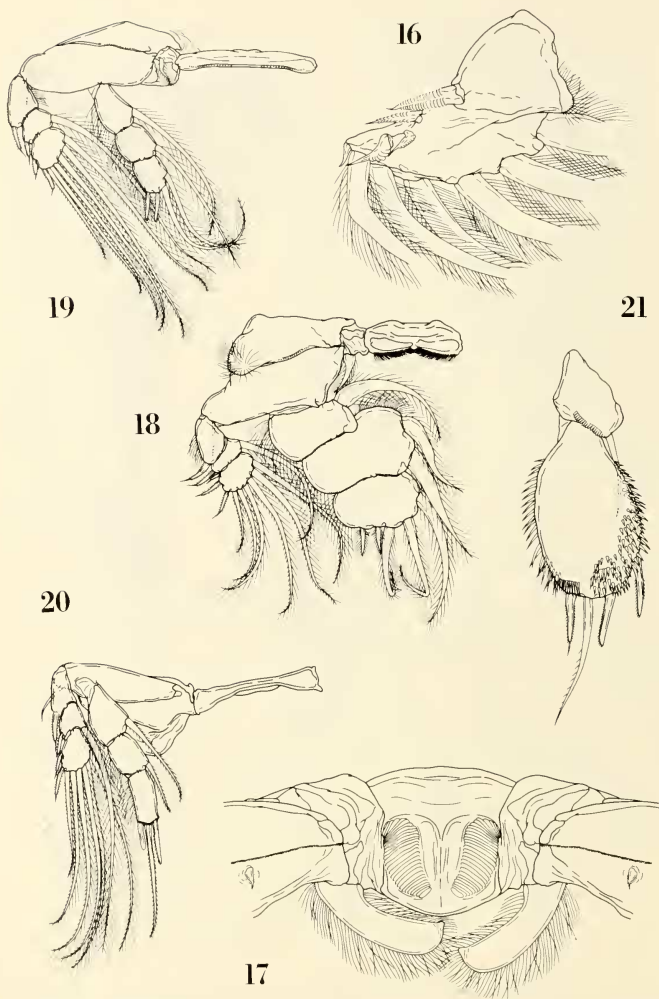
First antenna (Fig. 5) 5-segmented ventrally (second segment appears 3-seg-



Figs. 1-7. *Bomolochus paucus*, new species, female: 1, Dorsal; 2, Thoracic segment bearing leg 5, genital complex, abdomen, caudal rami, dorsal; 3, Genital area, dorsal; 4, Last abdominal segment and caudal rami, ventral; 5, First antenna, ventral; 6, Rostral area, ventral; 7, Second antenna, inner.



Figs. 8–15. *Bomolochus paucus*, new species, female: 8, Second antenna, outer; 9, Oral area, ventral; 10, Mandible, antero-inner; 11, First maxilla, postero-outer; 12, Second maxilla, anteroventral; 13, Maxilliped, ventral; 14, Maxilliped, ventral; 15, Leg 1, ventral.



Figs. 16–21. *Bomolochus paucus*, new species, female: 16, Leg 1 exopod, dorsal; 17, Leg 1 interpodal plate, ventral; 18, Leg 2, ventral; 19, Leg 3, ventral; 20, Leg 4, ventral; 21, Leg 5, ventral.

mented dorsally), fourth seta of first segment somewhat recurved in manner of congeners, setal formula 5, 23 (or 15, 4, 4), 4, 2 + 1 aesthete, and 7 + 1 aesthete. Rostral area between bases of first antenna with ventral hooks (Fig. 6). Second antenna (Figs. 7–8) with last segment bearing indiscrete rows of sparsely spaced spinules, 4 terminal articulated spines bent at nearly right angles, and 4 setae. Labrum (Fig. 9) with patches of spinules as in figure. Mandible (Fig. 10) with 2 short terminal blades; longer blade serrated along posterior margin, shorter blade with serrations on anterior margin and finer serrations along posterior margin. First maxilla (Fig. 11) with 3 stout plumose setae, nearly equal in length, and short naked seta. Second maxilla (Fig. 12) with 2 terminal spinose processes and short naked subterminal seta. Maxilliped (Figs. 13–14) with heavily sclerotized recurved claw bearing a short, blunt accessory process; claw bent at nearly right angle.

Legs 1–4 biramous. Leg 1 (Fig. 15) typical of genus; exopod segments bearing modified spines at outer corners of segments as in Fig. 16, interpodal plate (Fig. 17) with padlike surface; inner coxopodal seta spatulate. Leg 2 (Fig. 18) coxopod with cluster of long hairs at distal outer corner; exopod relatively small; endopod segments much wider than long, midsegment bearing 2 inner setae. Leg 3 (Fig. 19) rami about equal in size, midendopod segment with 1 seta. Leg 4 (Fig. 20) similar to leg 3, endopod only slightly longer than exopod, last endopod segment bearing blunt spine at outer corner, terminal spinulose seta, and inner bladelike spine. Leg 5 (Fig. 21) basal segment with posterior row of spatulate spinules and outer seta; second segment with patches of heavy spinules as in figure, 1 outer subterminal spine, terminal seta flanked by 2 shorter spines, innermost with terminal flagellum; 3 spines of about equal length. Leg 6 (see Fig. 3) represented by 3 setae at area of egg sac attachment.

Etymology.—The specific name *paucus* is Latin for “few,” alluding to the extremely low incidence and intensity of infestation.

Discussion.—The new species can be distinguished from all known species of *Bomolochus* except *B. soleae* Claus, *B. multicerus* Pillai, and *B. unicirrus* Brian by the presence of 5 setae on the last exopod segment of leg 4 of the female (all other species have 4). It can be distinguished from *B. multicerus* and *B. unicirrus* as these 2 species possess an elongated endopod of leg 4 of the female (nearly twice length of exopod). It can be easily separated from *B. soleae* as the ventral surfaces of all 3 abdominal segments of *B. soleae* bear patches of spinules (pers. obs.). This condition is uncommon in bomolochids (spinules, when present, usually only on last segment).

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